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mutagen and a carcinogen. The use of ethylene oxide as a fumigant requires extensive post detoxification and clean up procedures. Formaldehyde is potentially explosive and an occupational carcinogen. Moreover, it has poor penetrating ability. The use of formaldehyde as a fumigant requires extensive post detoxification and clean up procedures. Formaldehyde is potentially explosive and an occupational carcinogen. Moreover, it has poor penetrating ability. The use of formaldehyde as a fumigant requires extensive post detoxification and clean up procedures. Vaporized peroxide reacts generally with all organic compounds in the environment to be fumigated, thus having a high demand for fumigant. Vaporized peroxide is effective in fumigating spaces of volume less than 1200 ft³. Ozone reacts generally with all organic compounds in the environment to be fumigated, and has the shortest half-life of these fumigants, making ozone even less suitable than vaporized peroxide for the fumigation of large volumes.

Please replace the paragraph starting at page 1, line 23 and ending on page 1, line 29 with the following paragraph:

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Chlorine dioxide is recognized as an effective sterilant. However, no guidance is available regarding the use of chlorine dioxide for the fumigation of large volumes. Sodium hypochlorite is known to be useful and effective for scrubbing down surfaces. However, such procedures using sodium hypochlorite are labor intensive, affect appearance and integrity of materials scrubbed, and are not as suitable for large scale use as are the gas methods. Chlorine gas is also not suitable due to the health hazards, high corrosivity of the gas, and the production of chlorinated organic by-products.

Please add the following lines to page 8, line 28:

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For instance, the skilled artisan, once aware of this disclosure, would recognize that *Bacillus subtilis* spores are used as a surrogate to monitor the efficacy of fumigation of materials contaminated by pathogens such as *Bacillus anthracis*; thus the present invention encompasses fumigation of materials contaminated by pathogens as *Bacillus anthracis*.

In the Claims

Please add new Claims 19-35